

REMARKS/ARGUMENTS

Claims 1-12, 14-15, 17, and 19-23 were pending at the time of the mailing of the outstanding Office Action. Claim 9 was previously withdrawn from consideration. No claims have been amended, added or cancelled.

In the Office Action of 15 April 2011, the Examiner rejected claims 1-6, 8, 11-12, 14-15, 17, 22 and 23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 5,563,352 to Helmig (hereinafter "Helmig"). Claims 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Helmig in view of WO 98/07505 to Sheehan (hereinafter "Sheehan"). Claims 7, 10 and 21 were objected to as being dependent upon a rejected base claim but being allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

INTERVIEW SUMMARY

A telephone interview was conducted on 12 August 2011 between Examiner Daniel Robinson and attorney John Cunniff. The undersigned wishes to thank Examiner Robinson for the courtesies extended during the interview.

During the interview, the previous Office Action and response were discussed, particularly with regard to claim 1. The Examiner indicated that the previous amendments were viewed as not being sufficient to distinguish over the cited prior art. However, it was also acknowledged that the Office Action and the previous final Office Action of October 15, 2009 did not provided details regarding the nature of the rejection. Therefore, the Examiner indicated that if, following this response, the claims were still found not to be allowable, the subsequent

office action would be non-final. No agreement was made regarding the allowability of the claims.

REQUEST FOR RECONSIDERATION

Claim 1 was previously amended to recite that the second heated tube and the first heated tube are directly heated by being energized, and the second heated tube additionally heats the first heated tube by radiation of heat from the second heated tube.

To anticipate a claim, a reference must teach all elements of the claim (MPEP § 2131). The Applicant maintains that claim 1 and non-elected claim 9 patentably distinguish over Helmig. In Helmig, tube 100 and tube 125 are not heated by being electrically connected to a power source and then being energized. Instead, tube 100 and its contents are heated or cooled by the passage of a heated fluid or cryogen through columnar space 128, located between tube 100 and tube 125. (Helmig, Column 3, Lines 25-29.) Furthermore, due to the arrangement of tubes 100 and 125, tube 100 is not heated by radiation of heat from tube 125 itself, as indicated during the Interview of 12 August 2011. Again, heat is transmitted by the passage of fluid through columnar space 128 between tube 100 and tube 125. Additionally, there is no teaching or suggestion in Helmig that septa 126 and 127 could be used to transmit heat from tube 125 to tube 100. In this way, as stated in the specification, the claimed invention provides a improved temperature control over a fluid flowing through a tube, particularly at the ends of the tubes, over prior methods (see paragraph 0048 and Fig. 3).

Therefore, Helmig does not teach or suggest first and second heated tubes that are directly heated by being energized, and where the second heated tube additionally heats the first heated tube by radiation of heat from the second heated tube, as recited in claim 1. Because

claims 2-8, 10-12, 14-15, 17 and 19-23 directly or indirectly depend upon and contain all the elements of claim 1, these claims also patentably distinguish over Helmig. Accordingly, withdrawal of the rejection of claims 1-6, 8, 11-12, 14-15, 17, 22 and 23 under 35 U.S.C. § 102(b) is respectfully requested.

Claim 19 stands rejected as being obvious over Helmig in view of Sheehan. To establish a prima facie case of obviousness, three requirements must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. There must also be a reasonable expectation of success and the prior art reference or references must teach or suggest all of the claim limitations. (MPEP § 2143.) The Applicant maintains that neither reference teaches or suggests all the limitations of amended claim 1, which claim 19 depends upon.

The Applicant's comments regarding distinctions between the claimed invention and Helmig, as provided above, are repeated with regard to the rejection under 35 U.S.C. § 103(a). As with Helmig, discussed above, Sheehan also does not teach or suggest direct heating of tube 10 either by being connected to a power source and energized, or otherwise.

While an electrode (11) is present, Sheehan does not teach or suggest that electrode 11 heats tube 10. Instead, as indicated in the Office Action, Sheehan teaches that electrode 11 is designed to provide an electrical potential that may be adjustable to maintain a stable axial spray from capillary tube 10 (Sheehan, page 9, second paragraph). Contrary to the assertion made in the Office Action however, the creation of a high electric potential would have been of no consequence in a direct heating tube as claimed. The electrode of Sheehan provides an entirely different function from the electrode in the claimed invention. Combination of this type of

electrode with Helmig's apparatus to arrive at the claimed invention would not have been obvious to one of ordinary skill in the art. Furthermore, because the apparatus of Sheehan is an electrospray apparatus, one of ordinary skill in the art would not have even looked to Sheehan for a teaching regarding an alteration of Helmig's chromatography apparatus.

Under Example 4.2 of the USPTO's "Examination Guidelines Update: Developments in the Obviousness Inquiry After *KSR v. Teleflex*" (75 Fed. Reg. 53,643), the decision in *Crocs, Inc. v. U.S. International Trade Commission* (598 F.3d 1294) serves "as a reminder to Office personnel that merely pointing to the presence of all claim elements in the prior art is not a complete statement of a rejection for obviousness. In accordance with MPEP § 2143 A(3), a proper rejection based on the rationale that the claimed invention is a combination of prior art elements also includes a finding that results flowing from the combination would have been predictable to a person of ordinary skill in the art. MPEP § 2143 A(3)." The current rejection ignores, however, that Sheehan provides an electrospray apparatus, not a chromatography apparatus, as mentioned above. Therefore, the Applicants maintain that the combination of prior art elements do not include "a finding that results flowing from the combination would have been predictable to a person of ordinary skill in the art."

Therefore, the Applicant maintains that claim 19 patentably distinguishes over Helmig in view of Sheehan. Likewise, claim 20, which depends upon and includes all the limitations of claim 19, also patentably distinguishes over Helmig in view of Sheehan. Withdrawal of the rejection under 35 U.S.C. § 103(a) is requested.

Therefore, the Applicant also maintains that the pending claims are in condition for allowance. The issuance of a Notice of Allowance is earnestly solicited.

The outstanding Office action was electronically transmitted on 15 April 2011. The Examiner set a shortened statutory period for reply of three months from the notification date. Therefore, a petition for a one month extension of time is hereby made with this response. The Commissioner is authorized to charge any fee required to be paid with the filing of this paper or to credit any overpayment to Deposit Account 15-0450.

Respectfully submitted,

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